

Notice of Allowability

Application No.

09/885,319

Examiner

Jeffrey T. Barton

Applicant(s)

STAN ET AL.

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 09 November 2007.
2. ☒ The allowed claim(s) is/are 54-56, 58-72, 105-111 and 115-120.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Samuel Borodach on 16 November 2007.

The application has been amended as follows:

In the claims:

- a. In claim 56 at line 2, please delete the word "fion" and insert the word --from-- before the formula "InGaP".
- b. In claim 70 at line 2, please delete the word "germanium" and insert the word --germanium-- before the word "layer".
- c. In claim 71 at line 2, please delete the word "Gap" and insert the formula --GaP-- at the end of the claim.
- d. Please cancel claims 74-82.

2. The following is an examiner's statement of reasons for allowance:

Claims 54-56, 58-64, 105-111, and 115-120 had previously been indicated allowable for reasons noted in the Office Actions of 9 October 2007 and 24 March 2004. Claims 65-72 are now allowed due to the further limitation to "a two step diffusion profile

in the germanium substrate with two different dopants" and the further explanation of the material presented in the Declaration of 25 July 2007 (hereinafter "declaration")

In the Remarks filed on 9 November 2007, Applicant provided additional information, which demonstrates how the process described in Exhibit 1 accompanying the declaration results in the structure claimed in Claim 65. Namely, in the 3rd paragraph of the "Declaration Under 37 CFR §1.131" section, Applicant states that in the row for layer #10 on Page 3 of the Exhibit, the "I" present in the row labeled "TMAI" indicates that the listed gas flow is "idle", and that the flow of trimethylindium indicated is therefore not used in the deposition step, resulting in deposition of GaAs as claimed. This additional information in combination with the declaration is considered to reasonably demonstrate the possession of the invention of claim 65 prior to the effective filing date of Ermer et al, disqualifying this reference as prior art for these claims.

The other rejection of claim 65 relied upon Olson, which specifically teaches a cell positioned upon a substrate that has no junction. (Figure 1) The examiner considers modification to provide the instantly claimed diffusion profile to be a nonobvious modification, because the cell of Olson requires no junction in the substrate, and there is no teaching in the prior art of record that would have suggested such modification to one having ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jeffrey T. Barton whose telephone number is (571) 272-1307. The examiner can normally be reached on M-F 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTB
16 November 2007


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700